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Title: A NASA Applied Spaceflight Environments Office Concept

Abstract: The National Aeronautics and Space Administration (NASA) is launching a bold and ambitious new space initiative. A significant part of this new initiative includes exploration of new worlds, the development of more innovative technologies, and expansion our presence in the solar system. A common theme to this initiative is the exploration of space beyond Low Earth Orbit (LEO). As currently organized, NASA does not have an Agency-level office that provides coordination of space environment research and development. This has contributed to the formation of a gap between spaceflight environments knowledge and the application of this knowledge for multi-program use and for use outside NASA. This paper outlines a concept to establish a NASA-level Applied Spaceflight Environments (ASE) office that will provide coordination and funding for sustained multi-program support in three technical areas that have demonstrated these needs through customer requests. These technical areas are natural environments characterization and modeling, materials and systems analysis and test, and operational space environments modeling. Additionally the ASE office will serve as an entry point of contact for external users who wish to take advantage of data and assets associated with space environments, including space weather. This paper will establish the need for the ASE, discuss a concept for organizational structure and outline the scope in the three technical areas.

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